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# Network Effects in the Formation of the Financial Industry's Regulatory Preferences in the European Union



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| Abstract: | This paper examines the determinants of financial industry actors' regulatory preferences – examining why some financial industry actors prefer less stringent financial regulations while others prefer more stringent regulations. The determination of preferences, we argue, can be understood as mutually dependent. How an organisation is connected to other organisations through network ties may help to explain its regulatory preferences. Our empirical point of focus of this analysis is financial industry lobbying in the context of the European Union (EU). Using data from early 900 lobbying letters related to legislation on banking, insurance, and securities regulation, we map out a 'socialisation network' that models connections between financial industry firms, their associations, as well as a broad range of other organisations and actors that are auxiliary to this community of organizations. Using these data we find evidence that organizations' preferences are informed by their location within this socialization network. Controlling for a range of other plausible factors, we find that 1) those connected via common associational ties, 2) hose closer to one another in the network and 3) those more 'embedded' in this network are all less likely to diverge in terms of their preferences from one another. |

## Introduction

The question of financial industry lobbying has come into sharp focus in recent years, with the 2007 financial crisis acting as a particular turning point for scholarly research. Taking stock of the state-of-the-art in the political economy of finance and financial regulation, Helleiner and Pagliari (2011, 173) point out that many of our pre-crisis assumptions about financial industry power and lobbying have been proven untenable by the crisis. Chief among these was the assumption that when the financial industry lobbies it does so as a cohesive or unified group representing uniform preferences that stem from shared concerns about regulation (for example Drezner 2007; Frangakis 2009; Singer 2007). Recent research has gone a considerable distance in providing a more nuanced picture of financial industry lobbying. Scholars have tested assumptions about the ability of finance to act as cohesive group (Mügge 2006b, 2006a; Young and Pagliari 2017), have shown that financial industry lobbying involves a greater plurality of actors than previously expected, including NGOs and consumer protection groups (Kastner 2015), a variety of private sector actors (Pagliari and Young 2014) as well as an array of different types of financial industry actors (Chalmers 2015a, 2019). Critically, the policy areas of financial regulation turn out to be a very diverse lobbying arena wherein "sharp divisions […] among different parts of the private finance sector" make having unified lobbying aims and preferences more the exception than the rule (Helleiner and Pagliari 2011, 179).

This analysis seeks to contribute to this post-crisis research agenda by examining the determinants of financial industry actors' regulatory preferences. Why do certain financial industry actors prefer less stringent financial regulations while others prefer more stringent regulations? Relatedly, what are the conditions under which preferences diverge? These are admittedly huge questions. We only take on a small piece of them here, but emphasize that they are important not least because they speak to larger debates about financial industry lobbying influence, power, and regulatory capture (Baker 2010; Chalmers 2019; Keller 2018; Spendzharova et al. 2016; Woll 2013; Young 2012). In particular, understanding why industry actors have converging or diverging preferences sheds light on a key puzzle of financial industry lobbying, namely why finance, despite its central position especially in highly financialized economies and immense lobbying firepower, sometimes loses lobbying battles (McKeen-Edwards and Porter 2013; Young 2012; Puente 2012). Digging deeper into the notion of preferences means that we understand how they are formulated. The literature on neo-pluralism and business conflict suggests that there are a variety of axes of potential conflict between business actors in particular (see Falkner 2009), such as between firm sizes, and national-international dimensions of organizational scale. Other scholarship frequently draws from theories of national institutionalism to model the notion that national financial systems are a powerful force that conditions financial industry preferences (Fioretos 2010; James 2016; Zysman 1983).

A central contention is that institutional features of national banking sectors account significantly for preferences, as expressed for example in states' economic diplomacy as they confront regional (EU) or global (BCBS) policymaking. This is because of the historical embeddedness of banks and other financial intermediaries within a given national political economy (e.g., Howarth and Quaglia 2013; Moschella and Quaglia 2016; Howarth and Quaglia 2016).[1] These and other explanations for preferences are completely plausible, and we do not seek to evaluate them but rather extend the range of factors which condition preferences. We seek to include a range of explanations for preferences with a view to evaluating those that have been relatively neglected in existing scholarship: the role of network ties. Some scholarship, albeit not on finance in particular, has begun to do this (e.g. Murray 2014).

Adopting insights from social network analysis, we investigate the *mutual dependence* of preferences over financial regulation. In other words, how an organisation is connected to other

[1] We do not seek to test or to challenge this widely held assumption. However we do include this 'jurisdictional explanation' in our analysis, in addition to other variables described below.

organisations through network ties may help explain its regulatory preferences. We thus investigate whether preferences are shaped through a process of 'social influence', the effect that social network structures have on the beliefs, norms, attitudes, behaviours, and preferences of network participants (Hafner-Burton and Montgomery 2010; Kadushin 2012).

The empirical point of focus of this analysis is financial industry lobbying in the context of the European Union (EU), and in particular six critical pieces of EU financial regulation that have come to form the backbone of the EU's post-crisis financial regulatory architecture. This serves as an ideal setting for our analysis in that these regulatory reforms occurred in three different sub-sectors of finance (in banking, insurance, and securities) and over a relatively short time period (2008 to 2011). We assess preferences using nearly 900 comment letters sent to the European Commission during the consultation stage of these six pieces of legislation, which provide insight into the preferences of financial industry actors. We find a range of evidence that supports the social influence hypothesis. As network ties become more distant, regulatory preferences diverge; groups embedded in the same location in the network are associated with convergent preferences; and those that are more embedded in the overall network have convergent preferences.

Our analysis marks an important advance on existing studies. First, while building on existing studies of financial industry lobbying in the EU (Keller 2018; Spendzharova et al. 2016; Chalmers 2015b, 2019; Eising, Rasch, and Rozbicka 2014; Woll 2013) ours is the first study to use social network analysis to explain the regulatory preferences of financial industry actors. Existing research that does use social network analysis in the context of financial industry lobbying does so with different aims. For instance, recent efforts seek to explain when industry actors collaborate in the first place (James and Christopoulos 2017), to examine the linkages between industry and regulatory actors (Young, Marple, and Heilman 2017), to map out the social network structure of bank lobbying to assess industry influence over regulatory outcomes (Christopoulos and Quaglia 2009), or to describe the network structure and systemic volatility of the global system of financial integration (Anand et al. 2013; Battiston et al. 2009; Blochl, Fisher, and Theis 2010; Oatley et al. 2013).



**Explaining Financial Industry Lobbying Preferences**

Existing research provides some clues into why financial firms have certain regulatory preferences. First, there is a pervasive strand of research examining how firms' regulatory preferences are driven by concerns about their own financial performance, especially relative to other firms. For the most part, financial service providers prefer less stringent regulations, especially when it comes to capital requirements. Even 'a tiny percentage of reduction in capital requirements can represent a windfall of billions of dollars' (Lall 2012, 611) for financial service providers. Equally, small increases in capital requirements can reduce a firm's earning potential. It is no surprise that scholars have come to expect a race to bottom or so-called 'trading down' on financial regulation. At the same time, however, concerns over international competitiveness also shape industry actors' regulatory preferences. Loath to see international competitors operating under less stringent regulations, financial firms can also express preferences for more stringent regulation. Rather than a race to the bottom, regulatory patterns show a race to the top. Indeed, a competition-driven race to the top was evinced in the Basel I Accord, where US regulators and financial industry actors supported more stringent banking regulations in an effort to create an even playing field with their Japanese competitors (Oatley and Nabors 1998). A similar set of instances occurred in the Basel II Accord, whereby a minority of banks with a competitive advantage in particular risk management techniques sought to make Basel II capital requirements *more stringent*, not less (see Young 2012). In addition to arguments about finance's preference for less or more regulatory stringency, there is strong evidence that industry actors prefer the status quo. Presumably, powerful industry actors already operate under their ideal regulatory conditions (i.e., regulations already reflect industry preferences) and hence spend their lobbying energies protecting the current regulatory framework. Seminal research from the broader interest group

literature shows how the defence of the status quo is not only the most common position taken by private-sector actors, but that defending the status quo reflects the entrenched structural power of these same actors (Baumgartner et al. 2009, 20; Dür, Bernhagen, and Marshall 2015).

Preferences for more or less stringency or for retaining the status quo are not (entirely) inherent to an organisation, but rather can result from the adaptational pressures organisations encounter in the face of regulatory change (Drezner 2007). Harmonizing rules at the global level, integration at the regional level, or even the re-regulation of finance nationally, generate differential outcomes for industry actors and hence differential adjustment costs. Those facing lower adjustment costs prefer the proposed regulatory changes, while those facing high cost oppose it.

Can we say anything concrete about interest group preferences? The broader interest group literature does provide some guidance. For many scholars, the permanent characteristics of interest groups (i.e., the type of interests represented by the group) are determinant of lobbying success (Dür, Bernhagen, and Marshall 2015; Dür and Mateo 2016; Klüver 2013), the choice of lobbying strategies (Beyers 2002, 2004; Chalmers 2013; Dür and Mateo 2016; Gerber 1999; Kollman 1998), and the choice of lobbying venue (Beyers 2008). Others use group type as a proxy for group resources (i.e., financial resources and staff) (Bouwen 2004b; Dür and De Bièvre 2007; Mahoney 2004). Permanent group characteristics are also used to a limited extent to predict group preferences. The central point is the distinction between so-called diffuse interest groups (likes NGOs and consumer groups) and specific interest groups (like business associations and firms).[2] Diffuse groups represent the interests of broad segments of society (Beyers 2002, 589), are often open to all citizens (Baroni et al. 2014, 145; Walker 1991) and hence lack a well delineated and concentrated constituency (Beyers 2004, 216). In short, diffuse interest groups have diffuse preferences that tend to turn on 'general principles like equity, social justice, and environmental protection'(Dür and De Bièvre 2007, 82). By contrast, specific interest groups have well-circumscribed and concentrated constituencies representing socio-economic interests within specific economic industries (Beyers 2004, 216). As such, specific interests aggregate and articulate specific preferences, most often in the form of expert and technical information about policy proposals (Bouwen 2004a). Of course, these linkages between group type and preferences are tenuous at best. In fact, this research does more to carefully and systemically differentiate interest groups based on what and 'who' they represent than to say anything definitive about their preferences.

Examining group type provides an admittedly tenuous starting point for understanding preferences. But the problem, we argue, goes even deeper. Specifically, scholars working from a standard social scientific perspective assume that the preferences of one actor have no influence over the preferences of another. This is a pervasive issue in political science,[3] reflected in the notion of 'unconditional choice' (Rolfe 2009; Rolfe 2012) that defies our everyday intuition: that actors' preferences are informed by those around them, and are not made in complete isolation. This tendency translates directly into how we think about – or at least model – firm preferences: firms' regulatory preferences are assumed to exist in a vacuum. In this article, we argue that this way of thinking about preferences does not paint a complete or realistic picture of how firms (or groups or individuals for that matter) operate (Siegel 2009, 112).[4] To relax assumptions about the

[2] Scholars often discuss diffuse and specific groups using different terminology. For instance, Klüver (2013) speaks of sectional and broad cause groups. Others opt for a more general distinction between for-profit and non-for-profit, or business and societal groups. More recent research with a specific focus on group 'type' makes a distinction between business associations, citizen groups, labour unions, and professional associations (Dür, Bernhagen, and Marshall 2015; Dür and Mateo 2016). For a good overview on the question of the interest group concept and interest group types, see (Baroni et al. 2014).

[3] As Lazer et al (2010: 61) explain, this is "arguably the result of the boundaries among social science disciplines that emerged in the 1950s, when social network ideas found their home largely in sociology and anthropology while political science leaned toward statistical methods that assumed away interdependence among observations".

[4] "Individuals do not make political decisions in a vacuum. Across social science, a wealth of empirical evidence illustrates the ways in which social interactions can alter choice" (Siegel 2009: 112).

independent nature of preferences, we adopt insights from social network analysis that firms' preferences are *conditionally dependent* and that a firm's ties with other firms can explain why some firms have the regulatory preferences they do. To this end, we explain financial industry preferences as a partial function of their network ties.

**Social Influence, Network Ties and Preferences**

The starting point for this analysis is the idea that the connections or ties between individuals and groups can shape and change their preferences. In other words, network ties are, in their own right, consequential (Lazer 2011, 62). The basic idea here is that actors connected through network ties tend to, by virtue of their iterated interactions, become similar over time, in particular with regards to shared behaviours, habits, norms, beliefs, and preferences (Friedkin 1999; Gould 1993; Klofstad 2007; Siegel 2009, 124).

A large literature has developed around social influence exerted through interpersonal ties. In this view ties are able to circulate resources among network members. Resources can be both material and ideational (see Hafner-Burton and Montgomery 2010: 3) and can shape an individual's existing attitudes, behaviours, and preferences. In short, the circulatory effects of ties facilitate social influence. Particular attention has been given to how individuals' network ties determine levels of individual political engagement, whether in terms of political participation (Huckfeldt and Sprague 1991; Kenny 1992, 1994; Klofstad 2007; Lake and Huckfeldt 1998; Leighley 1990; McClurg 2003)[5], or inciting collective action (Siegel 2009) and social movements (Kuran 1991). Studies of political participation and collective action demonstrate how network ties circulate a steady "supply of political expertise" to network members. "[K]nowledgeable political discussants provide access to information that helps people recognise and reject dissonant political views, develop confidence in their attitudes, and avoid attitudinal ambivalence, thereby making participation more likely" (McClurg 2006, 737). In short, ties shape how individuals think, allowing them to update and change their policy preferences, considering new information and weighing it against existing attitudes (Gould 1993, 183). Related studies demonstrate how network ties also facilitate so-called 'behavioural spread' among network members and leading to preference convergence (Centola and Macy 2007; Fowler 2005; Gould 1993; Marwell and Oliver 1993; Rolfe 2005; Siegel 2009).

Social influence also functions at the group level. For instance, scholars have examined social influence in the context of how firms are connected through 'interlocking directorates' (W. Carroll 2009; W. K. Carroll and Carson 2003; W. K. Carroll and Fennema 2002; Heemskerk, Fennema, and Carroll 2016; Kentor and Jang 2004; Murray 2014; Nollert 2005; Useem 1079; Vitali, Glattfedler, and Battiston 2011).[6] The main thrust of this literature is to map out and assess evidence for a tightly knit and highly coordinated transnational business elite (or a global capitalist class) observed in how firms are linked by their board members. For our purposes, the central insight of this literature is related to how social influence circulates within and among firms through these interlocking directorate ties. As Heemskerk et al. (2016, 70) explain, these same network ties allow well positioned firms to "reproduce existing beliefs and ideas, as well as to disseminate new ones" to other firms. Scholars have also found that firms with ties organised

[5] Siegel (2011) has examines the network effects of political repression. His study shows how repression first works to reduce participation, but then, by way of generating an angry backlash among individuals, actually increases participation.

[6] Similar insights about the circulatory effects of networks and social influence can be found in the literature on "organisational socialization". The central aim of this research is understanding how individuals integrate into new working conditions. New workers who are quickly and effectively socialized into a firm's business culture will tend to stay longer in the job and be more efficient. The main insight in this literature is that newcomers with robust and vast ties within the organization will enjoy greater 'social resources', broadly understood as information about the firm, its business culture and other employees. In turn, greater access to social resources will have important socialization effects: employees will have the capacity to "acquire the attitudes, behaviours, and knowledge they need to participate as organisational members" (Fang, Duffy, and Shaw, 2011: 127).

through interlocking directorates are better able to "build consensus" and enforce conformity with linked firms (W. K. Carroll and Sapinkski 2010; Domhoff 1970; Heemskerk, Fennema, and Carroll 2016; Richardson, Kakabadse, and Kakabadse 2011). For Burt (1992), this form of social influence is related to an firm's position within a network. Some firms enjoy a brokerage position within a network that sees them acting as the sole link between different clusters of firms within the network. For Burt, this amounts to 'structural holes' within a network, where only very well-positioned brokers can bridge these holes. Critically, these well positioned individuals can strategically exploit these holes in order to spread specific beliefs, ideas, and preferences. Traag (2016) finds support for these social influence effects in a slightly different context. In his study of campaign contributions in the US, Traag found that individuals sitting on the same interlocking boards tend to donate to similar candidates. Murray (2014) has found significant evidence that corporate actors socializing through transnational organizational networks coordinate activity within US political races.

**Social Influence and Financial Industry Lobbying**

Our focus in this analysis is how social influence operates within networks of private sector actors engaged in lobbying to shape financial regulation. In particular, to what extent do network factors influence financial organisation's regulatory preferences? To answer this question, we focus on financial industry firms' formal membership ties in lobbying associations. A wide range of such business associations exist, such as the International Swaps and Derivatives Association (ISDA), and the Association of Financial Markets in Europe (AFME) to name but two prominent ones. While recent studies observe a rise in 'firm lobbying' in more general terms (Aizenberg and Hanegraaf 2017; Berkhout et al. 2017; Coen 1998; Selling 2016), lobbying associations continue to play a pivotal role in linking firms together and can enhance any given firm's lobbying power. Associations can pool lobbying resources, including financial, influential, and reputational resources (Heclo 1978; Hojnacki 1997; Hula 1999), moderate conflict among members, coordinate lobbying strategies, and form a consensus position on policy issues. Coalitions of industry actors send strong signals to policymakers about industry unity and where the bulk of support lies on a given policy issue (Berry 1989; Esterling 2005; Kingdon 1995; Mayhew 1974). Unity among members and even across multiple associations has been shown to enhance lobbying power (Chalmers 2019; Dahl 1958; Holyoke 2011; Smith 2000; Useem 1984).

Associations are major players in the lobbying of regulators (see McKeen Edwards and Porter 2013; Chalmers 2017), as not only do they aggregate resources and expertise but they signal relative unity in the lobbying process. Yet crucially they do not simply represent the interests of their members to policymakers. They are not just aggregation machines, but rather translators and deliberative forums. Associations facilitate repeated interactions among members where information, ideas, beliefs, and norms are exchanged. Interest group scholars have long acknowledged that associations actively work to *socialise* members through the provision of so-called 'solidary goods'. As Clark and Wilson (1961, 134) explain, these are intangible rewards that 'derive mainly from the act of associating and include such rewards as socialising, congeniality, the sense of group membership and identification, the status resulting from membership, fun, and conviviality, the maintenance of social distinctions'. Solidary goods, in other words, generate a shared sense of purpose and belonging among members and they may facilitate social influence within association-based networks.

Drawing together insights about social influence and membership ties described above, we can hypothesize about organisations' regulatory preferences. Ties within and through associations likely function as a means to circulate information, ideas, and norms among network members. This possibility means that on top of firms' 'autonomous' preferences toward a given regulatory policy, there may also be a 'socially influenced' component as well, as firms influence one another. Such social influence can thus potentially be observed in the convergence of regulatory preferences among actors within a network structure. These relationships can be complex. While members of

a given association are linked to one another through common membership, members on one association are also *indirectly* linked to other associations, and thus to other members, namely through the associational memberships of other members. Indeed, firms are often members of multiple associations, and some associations are even members of other associations. The central point here is that links between organizations are not always direct and can be indirect, and thus social influence is thus a function of an organisation's broader environment or social context (Siegel 2009, 124). We can conjecture, on this basis, that the preferences of an organization will be informed by those closest to them within this complex organizational network. This would have observable implications related to the location of a given organization, vis-à-vis others, in the network. We would expect that as ties become more distant between organizations, social influence should diminish and hence we expect less preference convergence between those two organizations. Organizations close to one another should have more similar preferences than those further away.[7]

**Research Design**

We test our 'social influence' hypothesis in the context of financial industry lobbying in the European Union and specifically with regard to the EU's regulatory response to the financial crisis. Indeed, the EU engaged in a major overhaul of its existing regulatory framework across all three sub-sectors of finance. In banking, the CRR and CRDIV saw the EU adopt (and adapt) the new Basel III rules for banks. Solvency II and IOPR II imposed more stringent regulation on insurance providers and occupational pension funds. Finally, MiFID II and AIFMD introduced new statutory rules for those working in securities markets, broadened the financial instruments that could be regulated and, for the first time, regulated hedge funds. Given the scope of these re-regulatory efforts, financial service providers were faced with a unique opportunity to shape the new EU rules, see their preferences reflected in EU directives and regulation, and would have therefore been highly motivated to engage in lobbying activities.

This context allows us to assess lobbying that occurred via consultations on European Commission legislative proposals. Our selection is based on two factors: first, it captures the most important post-crisis legislation in each segment of the financial sector and forming the new backbone of financial regulation in the EU; and second, it allows us to include proposals for which the Commission held a consultation. This ensures directly observable lobbying activity expressed as specific lobbying demands on specific aspects or 'issues' of a legislative proposal. This approach has several advantages. First, it establishes a population of interest groups that lobbied on proposed EU legislation. Hence, we know which organisations lobbied on each proposal as well as their precise lobbying demands. Using consultations to establish lobbying populations, observe lobbying behaviour, and to examine lobbying demands is a now well-established method in the existing literature (Broscheid and Coen 2007; Chalmers 2019; Furlong 1997; Klüver 2013; McKay and Yackee 2007; Nixon, Howard, and DeWitt 2002; Pagliari and Young 2014; Rasmussen and Carroll 2014; Selling 2016; Spendzharova et al. 2016; Yackee and Yackee 2006). Similarly, examining lobbying demands on discrete issues that form part of the overall proposal has also be used with great success in current studies (Baumgartner et al. 2009; Beyers et al. 2014). A central insight of this approach is that a great deal of lobbying takes place at the issue-level rather than the level of the proposal as a whole. Each legislative proposal comprises multiple issues, and interest groups weigh in on the issues that matter most to them, rather than the proposal as a whole. Table

[7] The expected relationship is one of average effects, and is probabilistic, in that there could of course be some organizations that are in disagreement but also close by in the organizational network, but this would not challenge the hypothesis unless there was on average more of such instances than the opposite.

1 gives an overview of the legislative proposals examined in this analysis as well as the number of issues for each proposal.[8]

**Table 1: European Commission Legislative Proposals in Banking, Insurance, and Securities**

| | Sector | Proposal | No. Issues |
|---|---|---|---|
| 1 | Banking | Public Consultation regarding further possible changes to the Capital Requirements Directive ('CRD'). (2009) | 14 |
| 2 | Banking | Public consultation regarding further possible changes to the Capital Requirement Directive ('CRD') (2010) | 5 |
| 3 | Insurance | Harmonisation of solvency rules applicable to Institutions for Occupational Retirement Provision (IORPs). (2008) | 7 |
| 4 | Insurance | Consultation on the Level 2 implementing measures for Directive 2009/138/EC on the taking-up and pursuit of the business of Insurance and Reinsurance (Solvency II) (2011) | 22 |
| 5 | Securities | Public consultation on Hedge Funds (2009) | 6 |
| 6 | Securities | Consultation on the review of the Markets in Financial Instruments Directive (MiFID) (2011) | 22 |



*Dependent Variable*

The basis for measuring our dependent variable is the expressed regulatory preferences of organisations that lobbied in at least one of the six consultations mentioned above. Our aim in this paper is to test our two network hypotheses and to compare these results to a further analysis based on a non-network (i.e., standard social scientific) explanation of regulatory preferences based on explanations outlined above, namely organisation type and organisational characteristics. As such, we engage in three separate analysis requiring two different approaches to measuring our dependent variable.

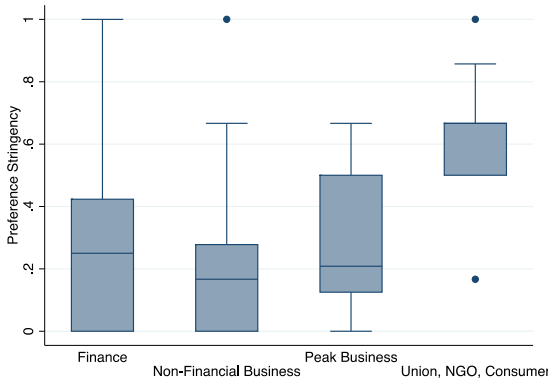
First, in a standard social scientific model, that assumes independence between individual organisations' preferences, we examine the extent to which organisational characteristics determine preferences. In this case, expressed regulatory preferences are measured in terms of the specific lobbying demands made by organisations in the consultation process. These demands were coded for each discrete issue and capture differences in terms of an organisation's preferred regulatory outcome. Demands were coded in four categories: 1 = support for the EC proposal; 2 = demand for a less stringent approach compared to the proposal; 3 = demand for a more stringent approach compared to the proposal; 4 = unable to code (the interest group weighs in on an issue but the demand is ambiguous). Inter-coder reliability tests, which saw three coders implementing the same coding procedures on different sub-samples of the dataset, resulted in a Krippendorf's alpha coefficient of 0.88, well within an acceptable range of reliability. An overview of the coding can be found in the appendix. For this variable, which we call *Stringency Preference*, we took the average level of regulatory stringency demanded for each issue in each Commission proposal to create a stringency index, calibrated from 0 (argues consistently for regulatory proposals to have lower stringency) to 1 (argues consistently for regulatory proposals to have higher stringency).

We can look at the distribution of preferences across different types of interest groups, via a boxplot visualization, reported in Figure 1, below. Unions, NGOs and Consumer groups want more stringency than all the other groups. Financial organizations are keen to argue for less stringency in regulatory proposals, though there is a range of these views. In line with existing scholarship on the role of non-financial business lobbying in this space (see Pagliari and Young 2014, 2017), non-financial businesses also have a preference for less stringency in regulatory proposals they weigh in on. Peak business, interestingly, offers more of a moderate position to

[8] Policy issues largely follow the European Commission's tendency to formulate consultation documents in terms of policy questions. Only issues that could be coded in terms of more or less stringency were included. Open questions, for instances, were excluded. A full overview of issues and coding can be found in the Appendix.

these different extremes, but still is mostly on the side of 'less stringency', like the other business organizations in the data.

**Figure 1: Boxplot Distribution of Stringency Preferences**




To test the social influence hypothesis, we assess expressed regulatory preferences measured in terms of *Preference Distance* between dyadic pairs of organisations. This assesses the extent to which there are differences between one organisation's lobbying demands and another organisation's demands. Again, we took the average level of regulatory stringency demanded for each issue in each Commission proposal. We normalized these differences to range between 0 and 1, with the mean value being 0.215 and standard deviation at 0.182.

*Key Explanatory Variable*

Our key explanatory variable is drawn from how a given organization is located within a large network of membership ties that we call a 'membership socialization network'. This network is composed of ties between organizations represent meaningful organizational links mediated through associational memberships. Doing this requires several steps. First, we identified all associations in our population of organisations that lobbied on at least one of the six EC proposals. Second, we collected year specific membership lists for each of these associations. Some of these lists were found online but in most cases the individual association was contacted directly in order to obtain these lists. A total of 289 lists were obtained consisting of more than 33,000 individual members. While some organizations are only members of one association, many others are members of several associations. Each node on this network is thus either a member (usually, but not exclusively a firm), and an association. Firms are connected to other firms only through associations, though some associations are members of some other associations.

To derive explanatory variables from this network we pursue three measurement strategies. First we measure how far away any one organization is from another. This variable of 'network distance' is measured as a count of the number of hops ('degrees of separation'), in minimal distance terms, between one organization and the other in the large network of organizational-membership ties, an approach that has been used elsewhere (see Young, Marple and Heilman 2017, 338). The reasoning here is that, as network distance increases, a given pair of organizations are more 'socially distant' to one another, and thus things like information, cultural cues, and other signals are less likely to be shared. Because our dyadic data are organised around organisations' memberships in associations, this means that the first 'hop' for all organisations is an association in which they are a member. For this reason (and because of the selection/endogeneity issues discussed below), we included a second indicator that is based on whether or not two organisations are members of the same association. Including this (binary) variable in our analysis helps us to differentiate the selection effect (or joining an association because you share the same *general*

preferences of its members) from the broader socialization effect in which you are influenced by other organizations' connections that you do not share.

Our second variable conceptualizes network embeddedness on a more meso-level scale. The variable *In the Core* measures whether or not a given organization is found to be occupying a position of being prominently embedded within the network, such that it is part of the 'core' of the network rather than its periphery. Core-periphery structures are widely recognized as one of the key meso-level structures of networks. Identifying a core of a network means finding a group of nodes that are densely connected with one another and that therefore govern the overall behavior of the network, and a periphery which does not have these properties. A number of different techniques can be used for identifying core-periphery structures within networks (see Shanahan and Wildie 2012; Rombach et al 2014) however we opt for a method that has recently been deployed to the study of economic elites, as this is closer to the other kinds of networks that have been used for other core-periphery analyses, such as the world wide web, transportation networks, or networks of proteins or cells, for example (see Csermely et al. 2013).

We use the technique of Larsen and Ellersgaard (2017a; 2017b) to define a core based on minimal distance paths from each node to each other node, generating a 'coreness' score.[9] We take those organizations as being one standard deviation above the mean of this score of 'coreness' to indicate being in the core, which we record as a 1, and 0 for not being in the core and thus in the periphery. Figure 2 provides a visualization of the entire network, with a central 'core' in the centre, highlighted in red. While the visualization suggests that the core is a substantive proportion of all nodes, it is actually only 5.31 percent of all nodes.

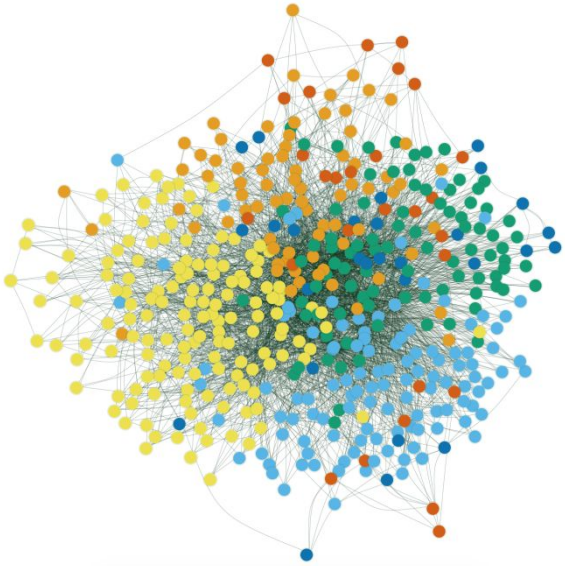
**Figure 2**
**Socialization Network, with 'Core' Highlighted in Red**

Our third variable derived from the network is a measure of 'communities' nested within the network. We did this through a method within network analysis called 'community detection'. Nodes – in this case, organizations – in the same community are more cohesively connected to

[9] An alternative could be use the rich-core algorithm (Ma and Mondragón 2015), which has also been used to detect core-periphery structures within international trade networks (see Vandermarliere et al 2018; Smith et al 2018).

one another than those in different communities (Fortunato 2010). Specifically we deployed a community detection algorithm known as the Louvain method, which is particularly well suited for community detection in large networks (Blondel et. al. 2008). The Louvain algorithm has a unique but intuitive way of generating community structure. It first looks for 'small' communities by optimizing modularity locally. It then aggregates nodes belonging to the same given community and builds a new network whose nodes are those the communities themselves. It does this repeatedly throughout the network until a maximum level of modularity is reached and a hierarchy of community is obtained, and until there is no redundant information left within the network (Blondel et al. 2008). Communities detected using this specific method have been used within political economy scholarship for a variety of purposes when larger networks are concerned (see Heemskerk and Takes 2015; Seabrooke and Young 2017). Within our organizational socialization network we detected 37 distinct communities using this method. These communities are not the same as associational membership. We used the community detection data to generate the variable *In Same Community*, which takes on a 1 when two organizations are in the same community, and 0 otherwise. Figure 3 visualizes what community detection looks like, for a subset of the 'core' described and visualized above (the full network is too complex to visualize meaningfully). Within this sub-set of the network, there are 6 communities, visualized by different colours.

**Figure 3**
**Core component of the network, with communities detected**



*Causal Assumptions*

We are cognizant of the limitations of these data for ascertaining 'clean' causal estimations. Our data is limited in so far as temporal variation is concerned. In an ideal scenario we would have changing associational membership over time, in addition to preferences being expressed over time. This would allow us a more precise causal estimation of how our explanatory mechanism (socialization through network embeddedness) affects preferences. The associational membership changes would also, ideally, be exogenous in that it is somehow unrelated to regulatory preferences (or at least not to preferences pertaining to the consultation responses being measured).

It is therefore important to emphasize how we understand potential causal processes to be operating, given that the data we are working with is observational data composed of an organizational network on the one hand, and expressed regulatory preferences on the other. The causal conjecture that our hypothesis is testing is whether there is positive evidence that the organizational network affects regulatory preferences. But we also must consider the possibility

that causation works in the opposite direction. In other words, that preferences might be endogenous to the membership socialization network itself? To consider this analytically, imagine two causal narratives that are possible with our data.

A first causal narrative (see (a) below) would state that some earlier state of preferences ($P_{t-1}$) led the organizational network ($ON_t$) to look the way it does in the first place. Firms forge relationships by their self-selection with one another into associations. As such, our inferential strategy is fundamentally backward, because an effect cannot produce a cause. A second causal narrative (see (b) below) would work differently: the organizational network, forged at an earlier time ($ON_{T-1}$), informs the regulatory preferences ($P_{ti}$) of actors within it, because associations channel and mediate the preferences of firms that inhabit the network.

$$\text{(a)} \quad P_{t-1} \rightarrow ON_t$$
$$\text{(b)} \quad ON_{t-1} \rightarrow P_{ti}$$
$$\text{(c)} \quad P_{t-1} \rightarrow ON_{t-1} \rightarrow ON_t \rightarrow P_{ti}$$
$$\text{(d)} \quad P_{t-1} + \text{ODC} \rightarrow ON_{t-1} \rightarrow ON_t \rightarrow P_{ti}$$

A more likely scenario is that both are going on at the same time, as indicated by (c) above. $P_{t-1}$ is different than $P_{ti}$ in that $P_{t-1}$ reflects general preferences, presumably across a range of issues that would induce an organization to join an association as a member, while $P_{ti}$ is a preference on a specific regulatory policy at a later point in time. It is $P_{ti}$ that we are trying to model in our analysis. What (c) indicates is that while some general prior preferences $P_{t-1}$ may have helped forge the associational ties that go into $ON_{t-1}$, as those membership ties persist they generate a new state of the same network, $ON$, which then (we hypothesize) informs preferences on specific regulatory policies, $P_{ti}$. As such the concerns of preferences being endogenous to the network is true in some very general sense, but is likely to be less severe given that $P_{ti} \neq P_{t-1}$. Moreover, as (d) above indicates, it is not only general preferences that go into $ON_{t-1}$ but rather a variety of other decisions and circumstances ($ODC$) as well. Organizations do not only join associations on the basis of the exact fit of their preferences, but also for other reasons, related to obtaining information, and the strategic choice that it is better to be on the inside of a collective body than on the outside of it. Inasmuch as joining an association might be partly related to preferences at a given time, those preferences could also change over time.

To put this into plain language, while reverse causality cannot be eliminated, it is likely to be minimized, for two reasons conveyed in the causal narratives outlined above. First, the regulatory preferences of firms at an earlier ($P_{t-1}$) phase that may have informed joining particular associations are not necessarily the same preferences as at the point in time in which we are observing them ($P_{ti}$). Second, there are *multiple* things that likely went into the formation of the organizational network in the first place, aside from regulatory preferences. While regulatory preferences may play a role, so too would other attributes of firms related to the utility of joining versus not joining an association ($ODC$). Consequently, estimating the relationship between an organization's location within the organizational network ($ON$) on that organization's preferences ($P_{ti}$) is feasible notwithstanding some measure of unknown endogeneity. What is key for such estimation of $P_{ti}$ is to have quality control variables which allow us to separate out the net effect of $ON$ on $P_{ti}$ versus other factors that condition $P_{ti}$.

*Control Variables*

We include a number of control variables in our analysis in order to improve our modelling estimation. There are three main groups of control variables. First, we coded the country in which an organisation has its headquarters. We included additional categories for EU-level associations (e.g., the European Banking Federation) and transnational associations (e.g., the International

Swaps and Derivatives Association). The dyadic variant is *Same Country* (a dummy variables capturing whether or not two organisations are from the same country).

Second, we include a variable to assess whether a given pair of actors lobbying are from different 'levels' of coordination and policy focus, and therefore may be at a higher level of potential preference divergence. What this means concretely is that a given pair were two national-level actors, or were two international actors, we coded 0; however in the case of one national-level actor and one international actor, we coded 1. This is motivated by previous research that finds that the national-international axis is one important source of inter-business conflict (Falkner 2009; Mügge 2006a; Mügge 2006b). This is likely to be especially true for EU-level regulation such as the consultations that we are working with in this study, and thus we include the dummy variable *National-International Dislocation* to indicate that one actor in a given dyad is from a different 'level' than another.

Third, we coded a number of control variables related to organisation type. To this end, we have coded every actor in our dataset based on several coding schemes. First, we coded for organizational type by using the well-established method of coding according to the International Standard Industrial Classification Scheme (ISIC rev.4), a United Nations system for classifying diverse economic-sector activities (Beyers et al. 2014; Chalmers 2015a, 2017; Pagliari and Young 2014; Young and Pagliari 2017). From this coding we created dummy variables for Financial Organisation and Non-Financial Businesses, and we distinguish between Associations, Peak Business Associations, and Financial Associations as well as other groups. We also generated a category for *Unions, NGOs & Consumer Groups*, for which we generated a variable, 'Unlikely pair' to control for the likely preference conflict that might exist when an NGO and financial firm are compared in terms of preferences. However we found (consistent with existing scholarship) that these only exist in two consultations. Because our regressions include consultation fixed-effects, we excluded a unique variable. Insofar as we are working with dyadic data (i.e., pairs of organisations), these classifications end up being reduced to the catch-all variable *Same Organisation Type* (which asks whether the two organisations in a dyadic pair the same type of organisation or not).

**Analysis**

As mentioned above, our outcome of interest is not simply expressed stringency preferences, but rather *Preference Divergence*, or the difference between two organizations' preferences, on the same consultation. The data thus have to be reconfigured as a series of dyadic pairs between organizations. Since the dependent variable for these models is calibrated as a proportion, we used a generalized linear model with a logit link, as recommended by best practices within the interest groups literature (Papke and Wooldridge 1996; Baum 2008; Chalmers 2014). Our models were specified to include consultation fixed effects, to address any effects unique to a given consultation and to provide estimates across consultations. Consultation number 6, which was by far the largest in the series that we utilized, operates as the base category in these regressions.

To test our hypothesis we ran regressions on these dyadic data, with preference divergence as the outcome of interest and controlling for a range of conditions related to organizational pairings for each dyad. Results are presented in Table 2 below. Each of our models examines our hypothesis from different angles, using different explanatory variables and interactions. Model 1 uses the variable 'distant neighbour' to indicate a dyad wherein two organizations, not in the same association, are at least four or more 'hops' away from one another in the organizational network. Our results indicate that, when conditioning on other factors such as country, organizational type, and national-international dynamics, when organizations are further away from one another they are more likely to be in preference disagreement.

Model 2 keeps the control variable of being in the same association but adds the variable for whether or not a pairing of organizations are in the same sub-community of the network, as

determined by the community detection algorithm described above. We find that, conditional on other factors in the regression, this measure of social embeddedness is negatively associated with preference disagreement. Note that these models 'control for' or 'condition on' being in the same association, to ensure that our network variables are not simply proxying for an organization's election into the organizational network on the basis of shared group preferences (see our discussion of causal assumptions above).

Model 3 includes a variable for whether or not a pair of organizations are both in the richly embedded 'core' of the network. The negative and statistically significant coefficient suggests that these pairings of more socially embedded organizations are less likely to be in preference disagreement than organizations in the 'periphery' of the network, and thus subject to less mutual socialization and information flows. Model 4 simply combines the latter two variables, and finds that the results for community and for core are not conditional on one another.

Finally, Model 5 includes combinatorial terms that indicate the three logical combinations (the base situation is not in the core, not in the same community) for whether the pair of organizations are both in the same community, both in the core, or in one of each. We find that each of these structural situations are negatively associated with preference disagreement compared to the base situation, which is supportive of our hypothesis. More supportive however is that a pair being both in the core and in the same community has the largest coefficient and is also statistically significant.



**Table 2: Regression results**

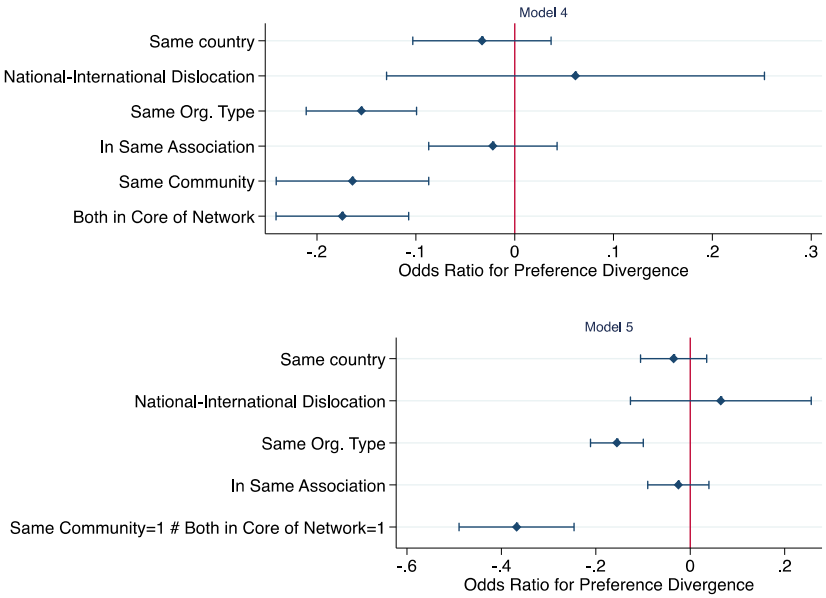
| | (1) | (2) | (3) | (4) | (5) |
|---|---|---|---|---|---|
| Same country | -0.0273 | -0.0238 | -0.0370 | -0.0331 | -0.0352 |
| | (0.0357) | (0.0355) | (0.0358) | (0.0357) | (0.0357) |
| National-International Dislocation | 0.110 | 0.0958 | 0.0761 | 0.0615 | 0.0648 |
| | (0.0969) | (0.0969) | (0.0975) | (0.0975) | (0.0976) |
| Same Org. Type | -0.162*** | -0.146*** | -0.171*** | -0.155*** | -0.155*** |
| | (0.0286) | (0.0284) | (0.0282) | (0.0285) | (0.0285) |
| In Same Association | 0.137*** | -0.110*** | -0.0514 | -0.0221 | -0.0252 |
| | (0.0485) | (0.0283) | (0.0327) | (0.0331) | (0.0331) |
| Distant Neighbour | 0.141*** | | | | |
| | (0.0295) | | | | |
| Same Community | | -0.166*** | | -0.164*** | |
| | | (0.0397) | | (0.0394) | |
| Both in Core of Network | | | -0.176*** | -0.174*** | |
| | | | (0.0343) | (0.0342) | |
| Same Community, but not both in Core | | | | | -0.127** |
| | | | | | (0.0498) |
| Both in Core, but not same Community | | | | | -0.159*** |
| | | | | | (0.0367) |
| Same Community and Both in Core | | | | | -0.368*** |
| | | | | | (0.0621) |
| Constant | -1.343*** | -1.203*** | -1.180*** | -1.181*** | -1.185*** |
| | (0.0314) | (0.0225) | (0.0230) | (0.0230) | (0.0232) |
| Observations | 6103 | 6103 | 6103 | 6103 | 6103 |
| *AIC* | 4667.3 | 4664.2 | 4662.7 | 4661.7 | 4663.5 |
| *BIC* | 4741.2 | 4738.1 | 4736.5 | 4742.3 | 4750.8 |

Notes: Robust Standard errors in parentheses, Consultation FE omitted, * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Overall our results provide supporting evidence for our central hypothesis. While we cannot rule out the potential for reverse causality completely, we do have logical reasons for its minimization (as argued above) and we are able to control for selection into associations through the *In Same Association* variable. These results are, to the best of our knowledge, the furthest that existing scholarship has gone with respect to explaining whether or not business-associational ties condition preferences of organizations lobbying over financial regulation. In Figure 4 below we

illustrate our results via a coefficients plot, that gives a sense of magnitudes and the range of estimated effects, specifically for Models 4 and 5 in Table 1 above.

**Figure 4. Coefficient Plot**




Because our measures of network embeddedness are executed as dummy variables in the regression, we can compare the net effect of these variables relatively easily to other variables that are associated with more conventional (i.e., standard social scientific) analyses. For example, it is instructive that organizational type – two organizations both being banks, or two organizations both being securities firms, etc. – has a negative association with the preference divergence outcome. And yet the estimated effect magnitude is about the same as the effect magnitude for being in the same community within the network. The fact that this already controls for being in the same association makes our finding with respect to community membership striking. Yet more importantly we can now say on the heels of these results that socialization within the network might matter equally as much or perhaps more in some instances in terms of informing our knowledge about the preferences that groups have, compared to more conventional factors

Table 3 below gives a comparative sense of these magnitudes. Because the substantive magnitude of odds ratios is difficult to interpret, we converted the regression estimates of each of the main variables in Model 5 above into a series of margin estimates. Thus the effect of being in the same country, as Table 3 below illustrates, lowers the preference divergence from 21.4% average level to 20.7%, with 95% confidence bounds ranging above and below both figures. This is a modest effect indeed, but so too are the marginal effects, measured in terms of magnitudes, of each of our main variables (though one should keep in mind that all estimates are in the .20s, as the mean level of preference divergence is .215).

**Table 3. Marginal Estimates**

| | | 95% Confidence Interval | |
|---|---|---|---|
| | Predicted Margin | Upper Estimate | Lower Estimate |
| *Same Country* | 0.214 | 0.209 | 0.219 |
| | 0.208 | 0.197 | 0.219 |
| *Same Association* | 0.215 | 0.208 | 0.221 |
| | 0.211 | 0.203 | 0.218 |

| | | | |
|---|---|---|---|
| *Same Org Type* | 0.230 | 0.222 | 0.237 |
| | 0.204 | 0.198 | 0.209 |
| *Both in Core* | 0.223 | 0.216 | 0.228 |
| | 0.194 | 0.186 | 0.202 |
| *Same Community* | 0.217 | 0.212 | 0.222 |
| | 0.193 | 0.182 | 0.204 |

The magnitude of effects we estimate from network structures are thus modest. We are not aware of existing analyses that look at effects such as these. And yet a lot of existing political economy scholarship tends to take seriously the stance that individual country memberships of organizations matter, and build elaborate theories based on such jurisdictional factors. In studies of the political economy of financial regulation within the EU, such stances are even more ubiquitous (for example, see Quaglia 2008; Howarth and Quaglia 2016; Chalmers 2015), given the cross-country variation that researchers are able to account for within the Europe. Yet effects that inform preferences outside of country jurisdiction, organizational type and situational context (e.g. pre/post-crisis) may also be at work, such as the ones we have estimated through the use of these simple social embeddedness measures.

One additional reflection is worthwhile and that is that the network itself is not 'doing' anything. It is merely 'capturing' something. It is a proxy representation of an underlying social dynamic. Yet what is that underlying social dynamic, that is being captured? In our network associational ties are the bedrock tie that binds the complex structure together. What do these ties – individually – mean? What travels along these ties is not just one thing, but likely a variety of things. We know for example that associational ties facilitate communication between members. Thus, information travels along these ties. That communication can take the form of bilateral transfers of information; but it can also result in a common cultural understanding among members, and along the network to a certain extent, regarding what one policy proposal might 'mean' in some logic of appropriateness sense. The notion that associational ties facilitate preference formation itself is of course not trivial in this context. Yet it does challenge the notion that we can understand preferences at the organizational level alone.

**Conclusion**

Our analysis advances on the post-crisis research agenda that calls into question assumptions that when the financial industry lobbies it does so as a cohesive or unified group. To this end, we have focused on the factors that shape financial industry lobbying preferences about regulatory stringency. Existing studies assume that firms' preferences are somehow formed in a vacuum and without any influence from the myriad connections these firms' enjoy with their industry confreres. Our starting point in this analysis is adopting a social network approach to understanding how preferences are shaped. In particular, we have investigated the *mutual dependence* of financial industry preferences about regulatory stringency: the idea that how an organisation is connected to other organisations through network ties shapes its own preferences.

Drawing on a unique dataset of financial industry lobbying across six EU financial regulatory proposals, we find considerable evidence supporting our arguments. First, examining the standard social science approach to explaining preferences, we do find some (albeit marginal) evidence that organisational characteristics have some bearing in stringency preferences. Despite this empirical evidence, the causal mechanism underpinning this logic is specious at best. More importantly we find strong evidence that an organisations' stringency preferences are also a function of that organisation's location in a social network. First, whether with respect to transmitting information or social cues, the extent to which network effects shape preferences is related to how close organisations are within a network. As network distance increases, the likelihood of having similar preferences dimensions. Our second main finding is that mechanisms of social influence also work though network communities. Taking into consideration the broad range of actors that form part of any one organisation's network environment paints a clear picture that network location matters when it comes to shaping stringency preferences.

While our study has made important advances in terms of applying network science to the study of financial industry lobbying preference, there are important avenues for future research that could build directly on this study. One obvious approach would to expand the study. Are these network effects the same in other sectors? What kind of variation can be observed across, say, firms operating in the energy sector, and those in retail? There are also promising avenues for future research that focus on finance. Specifically, future work could also examine the extent to which these network effects are observable at the national level (e.g. both domestic and international financial industry actors lobbying at the level of the UK government) or the international level (e.g., the Basel Committee, IOSCO, and IAIS). In the second example, we might expect these network effects to be diminished (at least relative to the current study) due to the broader remit of these agencies and the more international character of the financial services industry seeking access.

One important research design choice made in this analysis was to examine regulatory preferences in terms of regulatory stringency – more stringent regulation, less stringent regulation, or supporting the level of stringency proposed by the Commission, and then to average these out into a single score per consultation. Assessing preferences in this way may wash out important regulatory preferences and similarities that are also observable through lobbying demands more broadly conceived. To what extent are these type of preferences also subject to being shaped through the mechanisms of social influence? In this sense, our analysis of stringency preferences is ideal for examining network effects: such preferences are relatively straightforward and we could expect such information or social cues about regulatory stringency to flow relatively easily through network ties. In future research it would be interesting to see how more complex preferences and even ideas about financial regulation flow through network ties.



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